

has been patched at some time. The *T. brigitta* group is so characteristically different in pattern from the *T. hecabe* group, that my explanation seems infinitely more probable than that a form having the pattern of *T. Boisduvaliana* ♀, but (unlike all other species of the genus) having both sexes coloured pale yellow, should suddenly appear in the midst of the *T. brigitta* group. I believe *T. hapale* to be distinct from *T. floricola*, but to be a very nearly related species.

35. *Catopsilia florella*, Fabr.

♂, S.S. 'Kaiser,' off Zanzibar Island, 20th March; between Katunga and Mandala, 8th April; ♂♂ ♀♀, Mandala, 10th and 11th April, 1899.

36. *Papilio demodocus*, Esper.

Chinde, 29th March, 1899; caught near the bank of the Zambesi.

Hesperiidæ.

37. *Parosmodes icteria*, Mabille.

Between Katunga and Mandala, 8th April; Mandala, 10th and 11th April, 1899.

38. *Baoris fatuellus*, Hopffer.

Mandala, 11th April, 1899.

39. *Rhopalocampta forestan*, Cramer.

Mandala, 11th April, 1899.

XLIII.—*Descriptions of new Rodents from the Orinoco and Ecuador.* By OLDFIELD THOMAS.

*Rhipidomys marmosurus*, sp. n.

Size medium. Fur close, rather less woolly and more *Oryzomys*-like than in typical *Rhipidomys*; the hairs about 8-9 millim. long on the back. General colour above rich reddish fulvous, finely lined with black. Head paler and greyer, no definite face-markings. Ears large, with but little anterior basal projection; their backs thinly haired, black, contrasting markedly with the general colour. Sides paler

fulvous, passing gradually, without sharp line of demarcation, into the colour of the belly, which is dull white, faintly washed with buff. Throat, chest, and groins clearer white, the hairs white to their bases. Arms and legs fulvous externally, whitish internally. Hands and feet fulvous above, gradually becoming browner terminally. Fifth hind toe without claw reaching to the end of the first phalanx of the fourth. Sole-pads broad, naked, obviously of the climbing type. Tail fairly long, its basal three quarters of an inch covered, as in most opossums, with longer fulvous fur similar in character to that on the body; the remainder shorter haired than in most *Rhipidomys*, finely scaled, uniformly blackish brown throughout.

Skull in general shape much as in typical *Rhipidomys*; back of nasals about level with ends of premaxillæ; supra-orbital ridges well developed, evenly diverging backwards as far as the middle of the parietals, then converging again to the corners of the interparietal; anteorbital plate of zygoma little developed; palatal foramina short, not reaching backwards to  $m^1$ .

Molars of the squarish shape typical of *Rhipidomys*, but smaller than usual in proportion to the size of the animal.

Dimensions of the type (an adult male, measured in the flesh by collector):—

Head and body 124 millim.; tail 157; hind foot (s. u.) 26; ear 18.

Skull: greatest length 34·2; basilar length 25·8; greatest breadth 17·5; nasals 11·4 × 3·5; interorbital breadth 5·8; interparietal 4·7 × 10; palate length from henselion 14·5; diastema 8·9; palatal foramina 5·2; length of upper molar series 5·2.

*Hab.* Maipures, Upper Orinoco.

*Type* B.M. no. 99. 9. 11. 38. Original number 11710. Collected Jan. 22, 1899, by Geo. K. and Stella M. Cherrie. One specimen only.

Although apparently best placed in *Rhipidomys*, this interesting rat shows considerable resemblance to *Oryzomys* by its coarser fur and less hairy tail.

#### *Oryzomys auriventer*, sp. n.

A large dark species with a rich fulvous underside.

Size rather less than in *Mus rattus*. Form delicate, the limbs long and slender. Fur straight and fine, not soft and woolly as in *O. aureus*; hairs of back about 10 millim. in length. General colour above dark blackish fulvous, the fulvous and black forming a coarsely lined mixture, especially

dark in the middle of the back; sides clearer but still dull fulvous. Under surface from chin to anus rich ochraceous fulvous, the hairs slaty grey basally; line of demarcation on sides fairly sharply defined. Head like body, the middle line blackish, the cheeks more fulvous. Ears rather large, dusky brown. Fifth hind toe reaching to the middle of the basal phalanx of the fourth; metapodials brown above, digits inconspicuously whitish; soles quite naked. Tail long and slender, practically naked, brown throughout except basally below, where it is slightly lighter; scales small, averaging about 13 to the centimetre.

Supraorbital edges sharply square, with slight ridges which run back to the middle of the parietals. Palatal foramina not reaching back to the molars.

Dimensions of the type (an old male, measured in the flesh by collector):—

Head and body 147 millim.; tail 160; hind foot (s. u.) 35; ear 23.

Skull (of a second, rather younger, male): greatest length 38; basilar length 29.2; greatest breadth 19.6; nasals  $13 \times 4.5$ ; interorbital breadth 5.6; interparietal  $4.3 \times 10.5$ ; palate length from henselion 16.2; diastema 10; palatal foramina  $5.6 \times 2.5$ ; length of upper molar series 6.3.

*Hab.* Mirador, below Baños, on the Upper Pastasa River, E. Ecuador. Altitude 1500 m.

*Type* B.M. no. 99. 9. 9. 25. Collected Feb. 8, 1899, by Mr. P. O. Simons. Original number 239. Two specimens obtained.

This fine species has a certain superficial resemblance to *O. aureus*, Tomes, but the characters of its feet and skull show it to be really more allied to some of the members of the *O. laticeps* or *O. gracilis* group, from all of which it may be readily distinguished by its peculiar coloration.

#### *Zygodontomys stelke*, sp. n.

Similar to *Z. brevicauda* in general appearance, but much smaller, less rufous in colour, and with whiter feet.

Fur straight, hairs of back about 10 millim. in length. General colour above uniform grizzled fawn, the black and fawn about equally mixed; sides rather but not conspicuously paler. Under surface greyish, the hairs slaty basally, dull whitish terminally; no sharp line of demarcation on sides. Head like back, no darker markings round eyes. Ears of medium size, thinly haired, dull fawn or grey, no white spot on the head behind them. Arms and legs fawn-grey, upper

surface of hands and feet white. Tail about equal to the body without the head, thinly haired, brown above, well-defined white below.

Skull smooth and rounded, considerably bowed, its lateral profile evenly convex from nasal tip to occiput; supraorbital edges evenly divergent, the beading distinct, running in the usual way to the outer corners of the interparietal; palatal foramina extending to the anterior third of *m*.<sup>1</sup>.

Dimensions of the type (an adult male, measured by the collector in the flesh):—

Head and body 110 millim.; tail 38; hind foot (s. u.) 20·6; ear 17·7.

Skull: greatest length 30; basilar length 23·5; greatest breadth 15; nasal length 11·6; interorbital breadth 5; interparietal 4·1 × 9; palate length from henselion 12·5; diastema 8; palatal foramina 6·1 × 2·5; length of upper molar series 4·2.

*Hab.* Maipures, Upper Orinoco.

*Type* B.M. no. 99. 9. 11. 39. Original number 11522, collected by Geo. K. and Stella M. Cherrie.

This species is much smaller than the large *Z. brunneus*, Thos., and *brevicauda*, All., rather smaller, with differently shaped skull, broader nasals, and narrower choanæ than in *Z. microtinus*, Thos., and larger, with heavier feet and more clearly bicolor tail than *Hesperomys expulsus*, Lund, of which the British Museum possesses a topotype.

As I have used it before, I again provisionally use Dr. Allen's generic term *Zygodontomys* for this group; but Dr. Forsyth Major has drawn my attention to its close relationship to the typical *Hesperomys*, Waterh., as based on *H. bimaculatus*, and to the possibility that it should be amalgamated with that genus. As bearing on the question, the Orinoco species is of particular interest as being intermediate in size and character between the large "*Zygodontomys*" and the small "*Hesperomys*."

#### *Echimys Cherriei*, sp. n.

A small species, with the appearance of a young *E. trinitatis* or allied form.

Size small, form slender. Fur only spinous across the middle back and along a median line extending forwards to the withers; longest spines of this area about 19 millim. in length by 0·9 in breadth, horny white basally, gradually darkening to black terminally. General colour above coarsely grizzled rufous, very similar to that of *E. trinitatis* and its

allies; cheeks, sides of body, and hips clearer rufous. Under surface and inner side of limbs pure sharply defined white throughout. Upper surface of hands and feet white, browner along their outer edges. Tail about the length of the head and body, thinly haired, brown above and white below.

Skull (of a specimen with all the molars up and worn) almost exactly similar in size to that of a young *E. trinitatis* with only three molars erupted. Nasals slightly surpassing premaxillæ; supraorbital edges delicately ridged, the ridges disappearing almost immediately after passing the fronto-parietal suture; pterygoids narrow, not broadened or spatulate terminally. Molars very small, of the usual structure.

Dimensions of the type (an adult female, measured by the collector in the flesh):—

Head and body 198 millim.; tail 198; hind foot (s. u.) 40; ear 24.

Skull: greatest length 49.5; basilar length 34.8; greatest breadth 23.3; nasals, length 17.5; interorbital breadth 10.4; palate length from henselion 17; diastema 10.5; palatal foramina  $6 \times 3$ ; length of upper molar series 7.7.

*Hab.* Munduapo, Upper Orinoco.

*Type* B.M. no. 99. 9. 11. 47. Original number 12126. Collected Feb. 27, 1899, by Geo. K. and Stella M. Cherrie. One specimen only.

Its small size will readily distinguish this *Echimys* from any of its allies. The type, as shown by its teeth, is fully adult, but is no larger than half-grown specimens of *E. trinitatis*.

*Loncheres (Isothrix) bistriatus orinoci*, subsp. n.

Similar in size and general characters to the typical form from the Rio Guaporé, but the bright yellow frontal line is dulled to grizzled grey, passing on each side, without sharp contrast, into the dark supraorbital lines. Behind each ear a prominent whitish patch, contrasting with the blackish nuchal part of the coalesced supraorbital lines. Other characters as described in subsp. *typicus*.

Dimensions of the type (an adult female, measured in the flesh by collector):—

Head and body 232 millim.; tail 273; hind foot (s. u.) 42.

Skull: greatest length 57; basilar length 43.4; greatest breadth 29.5; nasals  $16.5 \times 7$ ; interorbital breadth 13.8; palate length from henselion 19.7; palatal foramina  $5.1 \times 3$ ; length of upper molar series 11.5.

*Hab.* Maipures, Upper Orinoco.

*Type* B.M. no. 99. 9. 11. 45. Original number 11755.

Collected 26th January, 1899, by Geo. K. and Stella M. Cherric. Five specimens examined.

I should have considered this fine animal as a distinct species from that of the Upper Madura were it not that Natterer's second specimen, from the Rio Negro, is, as I am kindly informed by Dr. Lorenz, more or less intermediate in character, as in locality, between the two.

**XLIV.—***Note on the Beech-Marten and Badger of Crete.*

By G. E. H. BARRETT-HAMILTON.

DURING the recent troubles at Crete H.M.S. 'Fearless' has been frequently stationed at the island, and I am indebted to her paymaster, Mr. H. O. Jones, R.N., for the opportunity of examining several skins of mammals obtained there. Among these two beech-martens and a badger are of special interest.

The two skins of the beech-martens sent by Mr. Jones do not belong to the typical *Mustela foina*, Erxleb., of Europe, but are indistinguishable from *Mustela foina leucolachnœa*, Blanford, of which the British Museum possesses specimens from Hazara in Afghanistan and Vernoë in Turkestan. The present locality therefore is a rather unexpected extension of the range of this subspecies.

The badger is very perceptibly lighter in coloration than those of Britain, but not so light as *Meles canescens*, Blanford, especially in the markings of the head. In this respect it agrees with two specimens from Seville, Spain, for which the British Museum is indebted to the late Lord Lilford, so that these Mediterranean badgers are interestingly intermediate between those of Persia and of Europe generally. I propose to regard this moderately light Mediterranean form as a subspecies under the name of *mediterraneus*, and to reduce Blanford's *Meles canescens* to subspecific rank. Of these two subspecies the following specimens are included in the British Museum collection:—

*Meles meles canescens*, Blanford\*, *Ann. & Mag. Nat. Hist.* 1875, xvi. p. 310, No. 74. 11. 21. 1, Abadah, Persia, 1870; No. 97. 10. 3. 53, ♀ juv., W. T. Blanford, Tarte Koule, Ferghana, Persia, altitude 13,300 feet.

\* "*M. affinis M. taxo*, sed minor, canescenti-griseo, haud fusco, dentibus posticis angustioribus. *Hab.* in Persia circum Isfahan &c."